# RCRA FACILITY FACT SHEET

**Chevron Environmental Management Company (CEMC)**
**Former ChevronTexaco Refinery**
**Evansville, Wyoming 82636**

## HISTORY

The former Texaco Refinery was constructed in the early 1920s by The Texas Company, whose name was later changed to Texaco. On October 9, 2001, Chevron Corporation and Texaco Inc. combined to form ChevronTexaco Corporation. As part of the internal reorganization following that combination, Chevron Environmental Services Company (CESC) became owner and operator of the former refinery.

The refinery was operational from February 1923 until August 1982. The refinery processed crude oil from local sources into gasoline, diesel, and other motor fuels and had a rated capacity of 21,000 barrels per day when it closed. Asphalt and petroleum coke were also produced. It is located approximately three miles east-northeast of the City of Casper in unincorporated Natrona County, Wyoming. The North Platte River forms the northern border of the 200-acre refinery site. The refinery property is bordered on the west by the Town of Evansville and on the east by the Sinclair Refinery (formerly Little America). The Burlington Northern Railroad tracks, various industrial properties, and three U.S. Highways (20, 26, and 87) are located along the southern boundary.

## CORRECTIVE ACTION

Texaco submitted revised RFI reports to WDEQ during late 2000 and early 2001. The RFI reports contain a large volume of information regarding testing of groundwater, surface water, sediment and soils conducted at the facility over the past 20 years. The reports also contain information concerning Texaco's/CESC's efforts to decommission the former refinery and remove refinery components and impacted materials that could have been a source of contamination or adversely effect future development of the property (e.g., underground piping). The Final RFI Reports were approved by WDEQ in October 2001.

## WYOMING'S VOLUNTARY REMEDIATION PROGRAM (VRP):

Corrective action at the Former Texaco Refinery is required by two WDEQ Administrative Orders on Consent (AOC). The AOC's govern site wide RCRA corrective action, submittal of workplans and reports (RFI and CMS), and implementation of interim measures. In June 2003, based on CESC's May 2003 application to Wyoming's Voluntary Remediation Program (VRP), WDEQ determined the site was eligible to participate in the program. The VRP was created by the Wyoming Legislature in their 2000 session. The VRP is a set of comprehensive standards and procedures for voluntary remediation of contaminated sites in Wyoming, and its provisions are contained in the Wyoming Environmental Quality Act.

Under the VRP, in March 2004, a Preliminary Remediation Agreement (PRA) was signed by CESC and the Department. The PRA specifies that CESC will conduct human health and ecological risk assessments. CESC submitted the March 31, 2006 Human Health and Ecological Risk Assessment Reports for the South Property. It is expected the Department will approve the reports in late 2006 once minor revisions to the reports are completed. Under the VRP, it is anticipated that a Remedy Agreement will be developed in late 2007. The Remedy Agreement will establish the remediation requirements for the South Property (refer below regarding remediation of subsurface petroleum hydrocarbon and groundwater). It is anticipated the South Property will be cleaned up for use as industrial and recreational purposes. To satisfy corrective action items within the Remedy Agreement, Remedial Action Plans (RAP) are to be developed for different media/areas of the site. RAP – 1 was finalized on July 27, 2010 and addresses corrective action remedies at Remedial Management Areas (RMA) 1 through 13 on the South Property for soils and groundwater only at RMA-9. RAP – 2 was finalized January 2, 2013 and

addresses corrective action remedies for RMAs 1 through 7 on the South Property for groundwater. A Remedy Alternatives and Evaluations Report (RAER) for the Upland Aquatic Area located on the North Property was approved November 29, 2012 and an Upland Aquatic RAP is currently being developed to address soils in that area. A RAER for RMAs 11 and 13 is being finalized to address to address groundwater and will be approved in 2013. A RAP – 3 for RMAs 11 and 13 will be finalized in 2014.

CESC submitted Human Health and Ecological Risk Assessment Work Plans for the South North Property (SNP) on July 12, 2006 and June 30, 2006, respectively. The Department approved these work plans on August 23, 2006. It is expected the Human Health and Ecological Risk Assessment Reports for the SNP will be submitted by the end of September 2006. Based on additional sampling conducted for the risk assessments, waste material was identified in the western portion of the SNP. The waste was excavated from late July to early September 2006. Approximately 25,000 cubic yards of waste material and contaminated soils were removed and managed in the CAMU. The Remedy Agreement was finalized in 2010 and establishes the remediation requirements for the SNP. Cleanup will be based on industrial and recreational uses.

## SUBSURFACE PIPING AND CONTAMINANT SOURCE REMOVAL PROJECT

Texaco began decommissioning its former Refinery during mid 1996. As part of that process, Texaco removed all inactive underground piping, concrete foundations and other subsurface structures that were associated with the operating plant. Texaco decided to remove the underground piping and structures in conjunction with its overall efforts to eliminate possible sources of environmental contamination. In addition, Texaco developed and implemented a program to identify, field screen and remove petroleum contaminated soils (PCS) in conjunction with the piping removal effort.

The first step in the process involved field checks and review of refinery drawings, piping location maps and aerial photos to identify all known or suspected piping and subsurface structures throughout the refinery. All hydrocarbons recovered from the piping were transferred to on-site storage tanks for later resale; recovered water, if present, was transferred to the on-site water treatment system for processing.

After the piping and structures in a specified area had been isolated and drained, excavation equipment was used to completely expose all piping and structures to be removed from the subsurface. Concrete structures such as slabs, curbing, footings and foundations were broken up, removed, and crushed into gravel. Texaco estimates that more than 210 miles of piping were removed from the subsurface, approximately 42,000 gallons of hydrocarbons were recovered from the piping, and approximately 100,000 tons of concrete were excavated, crushed and beneficially re-used onsite. Following removal of piping and subsurface structures, open excavations and exposed piping corridors were visually inspected for the presence of petroleum-contaminated soils. Approximately 135,000 tons (90,000 cubic yards) of petroleum contaminated soils have been excavated, removed and treated under this program. The final phase of the project included application of continuous-profiling electromagnetic (EM) geophysical surveys coupled with a global positioning system (GPS) to detect and map the positions of any buried objects composed of or containing metal (both ferrous and non-ferrous).

In addition to petroleum contaminated soils that were identified and removed during the refinery decommissioning activities, a total of more than 420,000 cubic yards of refining wastes and related petroleum contaminated soil, sediments, structures and debris have been excavated and removed from the subsurface, resulting in elimination of 24 Solid Waste Management Units over the period from 1997 to 2005. The majority of these materials have been placed in a Corrective Action Management Unit located on the North Property.

After refinery demolition was completed, Texaco embarked on grading the site to provide proper stormwater drainage and seeding the property with a mix of native grasses. Site grading was completed during late 2000 and seeding was conducted during early 2001.

## GROUNDWATER RESTORATION

CESC operates and maintains 21 full time groundwater restoration systems at the former refinery, including 3,650 linear feet of interceptor trenches, 12 hydrocarbon recovery wells, and two large soil vapor extraction systems. Historically, Texaco/CESC has recovered approximately 17 million gallons of hydrocarbon from beneath the former refinery and has treated and removed contaminants from approximately 2 billion gallons of groundwater. These groundwater restoration efforts will continue over time.

## STEEL SHEET PILING BARRIER PROJECT

Between 1993 and 1997 Texaco installed an extensive network of groundwater interceptor trenches along the south bank of the North Platte River to contain and remove subsurface contaminants that exhibited potential to adversely influence surface water quality in the river. Texaco launched the barrier project in mid 1997 to provide an added measure of protection for the river, while maintaining operation of the interceptor trenches. Studies indicated that Waterloo Barrier, a patented form of steel sheet piling with sealable joints, would likely provide the most effective solution.

The Waterloo Barrier sheet piling is similar to conventional steel sheet piling, except the patented design allows each joint between the sheet piling panels to be individually grouted and sealed. With an overall length of 3,400 feet and surface area of more than 87,000 square feet, the sealed-joint barrier wall at the Texaco Refinery is one of the largest of its kind in the world.

## INNOVATIVE TECHNOLOGY FORUM:

CESC, the WDEQ, EPA and other federal agencies, industrial and consulting companies formed a cooperative group under the umbrella of EPA's Technology Innovation Office Remediation Technology Development Forum (RTDF). Until March 2006, The RTDF met regularly to share information on innovative testing and remediation technologies for petroleum hydrocarbon. CESC volunteered the former refinery in Evansville as a test site for the RTDF program. CESC has conducted and will continue to conduct field work to investigate subsurface petroleum hydrocarbon and evaluate innovative remediation technologies.

## CONSTRUCTION OF CORRECTIVE ACTION MANAGEMENT UNIT:

Texaco submitted a permit application to the WDEQ in November 2000, as revised in July 2001, to construct a Corrective Action Management Unit (CAMU) at the facility. The Department approved the CAMU application in December 2001. The CAMU is an engineered landfill designed and constructed to safely contain wastes generated during environmental restoration activities at the former refinery. Wastes managed in the CAMU consist primarily of non-hazardous petroleum contaminated soil, asphalt, concrete rubble, scrap metal, wood and related demolition debris. Phase I construction began in March 2002 and was concluded in June 2002. Phase II operation began in June 2002 and will continue into future years.

## AWARDS

The lead Texaco project managers (Ali Tavelli, Wyoming DEQ and Randy Jewett for Texaco) were much honored to receive the USEPA Region 8 Regional Administrator's Award for Outstanding Environmental Achievement in June of 2000. In addition, Texaco was nominated for the 2000 Chairman's Stewardship Award given by the Interstate Oil and Gas Compact Commission.

## ENVIRONMENTAL INDICATORS

Environmental Indicators ("EI's") are an EPA measure used to determine if contamination is being mitigated at or from RCRA facilities. RCRA authorized states, such as Wyoming, make the determination whether a facility has met the EI's, and that information is reported to EPA. There are two Environmental Indicators: 1) "Human Health Exposures Under Control"; and 2) "Migration of Contaminated Groundwater Under Control". In 2002, the WDEQ made the determination that human health exposures are under control. In 2000, the WDEQ made the determination that the migration of groundwater was under control.

## FOR MORE INFORMATION

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